

With regard to the § 102(e) rejection, Applicants note that the Manual of Patent Examining Procedure (MPEP), Eight Edition, August 2001, §2131, specifies that a given claim is anticipated “only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference,” citing Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, MPEP §2131 indicates that the cited reference must show the “identical invention . . . in as complete detail as is contained in the . . . claim,” citing Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

For the reasons identified below, Applicants submit that the Examiner has failed to establish anticipation of at least independent claims 1, 10, 19 and 20 by the Smyth reference.

The independent claims are directed to methods and apparatus for processing a plurality of programs for transmission in a communication system.

In their previous response, Applicants amended each of the independent claims 1, 10, 19 and 20 to specify that the claimed plurality of programs comprises separate and independent information signals not derived from a common signal source, and that a given one of the programs thereby comprises an associated information signal that is unrelated to information signals associated with the one or more other programs.

With reference to the illustrative embodiment shown in FIG. 1 of the drawings, the audio programs Audio 1, Audio 2, . . . Audio N represent separate and independent audio programs, each subject to individual PAC encoding in a corresponding PAC encoder of encoder bank 12. A given one of the audio programs may comprise a stereo audio program, as indicated on page 6, line 8 of the specification. A stereo audio program may include both a center channel and one or more side channels, such as a left channel and a right channel, as indicated on page 1, lines 25-27 of the specification.

In contrast to the claimed arrangements, the Smyth reference discloses adaptive bit allocation as applied to a single stereo audio program. At column 6, lines 57-61, Smyth indicates that the channels of the encoder 12 in FIG. 2 correspond to “left front, center, right front, left rear and right rear.” These are the various components of a single stereo audio program. The multi-channel PCM audio data 14 that is input to encoder 12 is thus derived from a single common signal source, namely,

a common audio signal for which the various stereo components are generated. Each of the channels is therefore related to each of the other channels, as these channels correspond to components of a single stereo audio program.

It is therefore believed that the independent claims as amended distinguish the single stereo audio program arrangements described in Smyth.

The Examiner in the final Office Action, at page 6, section 5, argues that Smyth teaches the claimed multiple program coding arrangements. More specifically, the Examiner argues that the five-channel case described at column 6, lines 57-61, of Smyth is merely “an example” of a more general arrangement that is allegedly disclosed by Smyth and meets the claim limitations. Applicants respectfully disagree. There is simply no disclosure in Smyth regarding the claimed arrangements involving criticality measure based bit allocation for a plurality of programs, where the plurality of programs comprises separate and independent information signals not derived from a common signal source, with a given one of the programs thereby comprising an associated information signal that is unrelated to information signals associated with the one or more other programs.

The Examiner in support of his position relies on the disclosure provided in the abstract and column 5, lines 52-54 of Smyth. However, none of these relied-upon portions of Smyth, nor any other portions of Smyth, teach or suggest the claimed criticality measure based allocation applied to a plurality of programs comprising separate and independent information signals not derived from a common signal source. For example, the abstract of Smyth provides as follows, with emphasis supplied:

A subband audio coder employs perfect/non-perfect reconstruction filters, predictive/non-predictive subband encoding, transient analysis, and psycho-acoustic/minimum mean-square-error (mmse) bit allocation over time, frequency and the multiple audio channels to encode/decode a data stream to generate high fidelity reconstructed audio. The audio coder windows the multi-channel audio signal such that the frame size, i.e. number of bytes, is constrained to lie in a desired range, and formats the encoded data so that the individual subframes can be played back as they are received thereby

reducing latency. Furthermore, the audio coder processes the baseband portion (0-24 kHz) of the audio bandwidth for sampling frequencies of 48 kHz and higher with the same encoding/decoding algorithm so that audio coder architecture is future compatible.

Thus, the abstract of Smyth, relied upon by the Examiner as allegedly teaching or suggesting the claimed criticality measure based allocation, specifically refers to a multi-channel audio signal, using the singular tense, and fails to disclose or suggest the claimed plurality of programs comprising separate and independent information signals not derived from a common signal source. Similarly, the relied-upon portion of Smyth at column 5, lines 52-54, provides as follows:

The encoder 12 encodes multiple channels of PCM audio data 14, typically sampled at 48 kHz with word lengths between 16 and 24 bits, into a data stream 16 at a known transmission rate, suitably in the range of 32-4096 kbps.

It can be seen with reference to FIG. 1 that there are five channels input to the encoder 12, and as described at column 6, lines 56-61, these five channels are all associated with the same audio signal. Although it may be possible for the particular number of channels to differ from embodiment to embodiment within Smyth, the fact remains that Smyth requires that each of the channels be part of the same multi-channel audio signal.

Other portions of Smyth support the position of Applicants in this regard. For example, it is interesting to note that the claims of Smyth, including independent claim 1, call for applying an audio window to each channel of a multi-channel audio signal sampled at a sampling rate.

Applicants therefore again submit that there is no teaching or suggestion whatsoever in Smyth regarding the claimed arrangements involving criticality measure based bit allocation for a plurality of programs, where the plurality of programs comprises separate and independent information signals not derived from a common signal source, with a given one of the programs thereby comprising an associated information signal that is unrelated to information signals associated with the one or more other programs.

Since each of independent claims 1, 10, 19 and 20 includes at least one limitation not taught or suggested by the Smyth reference, the §102(e) rejection is believed to be improper, and should be withdrawn.

Dependent claims 2-9 and 11-18 are believed allowable at least by virtue of their dependence from their respective independent claims. These claims are also believed to define additional separately-patentable subject matter relative to Smyth and the other art of record, taken singly or in combination.

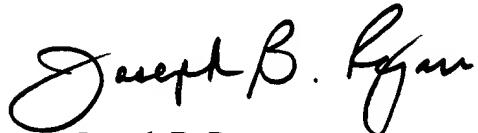
For example, with regard to dependent claims 8 and 17, each of these claims calls for a linear criticality flag that takes on one of at least three possible values, including a first value indicating stationary low-complexity audio, a second value indicating stationary higher-complexity audio, and a third value indicating presence of at least one of an onset or transient. The Examiner argues that these limitations are met by the teachings in column 5, lines 38-52, column 7, lines 4-10, and column 14, lines 37-60. However, the relied-upon teachings fail to disclose or suggest a linear criticality flag that meets the particular limitations in question, in terms of an ability to take on one of at least three particular specified values.

With regard to the §103(a) rejection of dependent claims 6 and 15, Applicants respectfully traverse. Applicants submit that it is improper for the Examiner to attempt to take official notice regarding a criticality measure comprising a single-bit criticality flag, since the limitation in question calls for a single-bit criticality flag the value of which indicates the presence or absence of at least one of an onset and a transient in the corresponding program. Even if it is assumed, for purposes of argument only, that Smyth actually teaches a criticality measure which relates to an onset or transient, Smyth apparently teaches to use something other than a single bit to characterize any such criticality measure, and thus teaches away from the particular limitation in question. The mere fact that a single bit can be used to indicate one of two states fails to overcome the teaching away that is inherent in Smyth, and the proposed combination of Smyth and official notice therefore fails to meet the limitation in question.

In view of the above, Applicants believe that claims 1-20 are in condition for allowance, and respectfully request withdrawal of the §102(e) and §103(a) rejections.

As indicated previously, a Notice of Appeal is submitted concurrently herewith.

Respectfully submitted,



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Enclosure(s): Notice of Appeal